



NATIONAL NANOTECHNOLOGY INITIATIVE OF SRI LANKA - DEVELOPMENT OF A FRAMEWORK FOR SUSTAINABILITY ANALYSIS

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The dissertation was submitted to the Department of Management of Technology of the University of Moratuwa in partial fulfilment of the requirement for the Degree of Master of Business Administration.

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2009

94824



Abstract

Nanotechnology is considered as the next industrial revolution of the world and many nations are heavily investing in nanotechnology, recognizing the tremendous economic potential of this emerging technology. Sri Lanka has missed the earlier opportunities to harnesses the full potential of electronics, IT and biotechnology revolutions and government of Sri Lanka is determined to harness the full potential of nanotechnology revolution to the local economy and to realize this has come up with a National Nanotechnology Initiative for Sri Lanka.

National Nanotechnology Initiative of Sri Lanka (NNISL) is a unique private public partnership, designed to deliver results in 3 - 5 years. There is uncertainty associated with the financial health of the initiative, time taken to develop commercially marketable research applications, technology transfer to Sri Lanka and intellectual property rights environment of Sri Lanka. Therefore significant doubt is associated with the sustainability of the NNISL.

Sustainability indicator framework is developed during this research to evaluate the sustainability of NNISL. NNISL sustainability indicator framework consists of 6 aspects, 36 sub-themes and 79 indicators. Six aspects of the sustainability framework are economic, social, environmental, institutional, technological and legal sustainability. 40 indicators out of 79 indicators are leading indicators -and-the balance are lagging indicators.

NNISL sustainability can be evaluated using sustainability indicator framework. According to the leading indicator assessment, NNISL does not meeting the minimum requirements of sustainability assessment criteria and can not be defined as a sustainable initiative at current environment. Therefore improvements are required in number of areas to make the NNISL sustainable in the long run. However NNISL is still at a very early stage, future sustainability is very much depends on the progress of the initiative and success of the initial 20 projects.